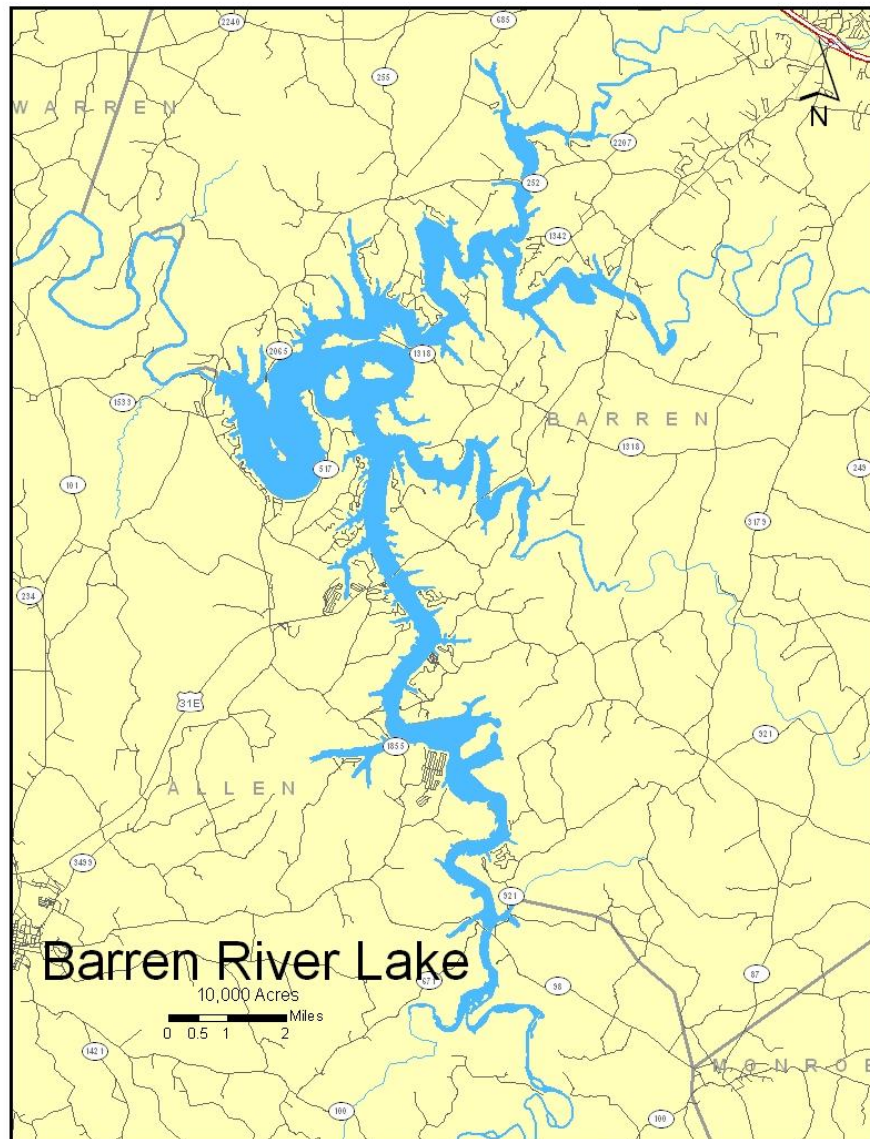


Barren River Lake Bass Assessment 2013

Barren River Lake is a 10,000 acre reservoir operated by U.S. Army Corps of Engineers. Impounded in 1964, this flood control reservoir experiences a 27-ft fluctuation in water levels beginning in mid-October with fill up beginning in mid-March. Lake stratification occurs from mid-May to mid-October with thermocline depths during the summer months ranging from 15 to 18 feet. The lake is classified as moderately fertile and enjoys an abundant forage fish population dominated by gizzard shad. Alewives are also present, but abundance fluctuates widely.

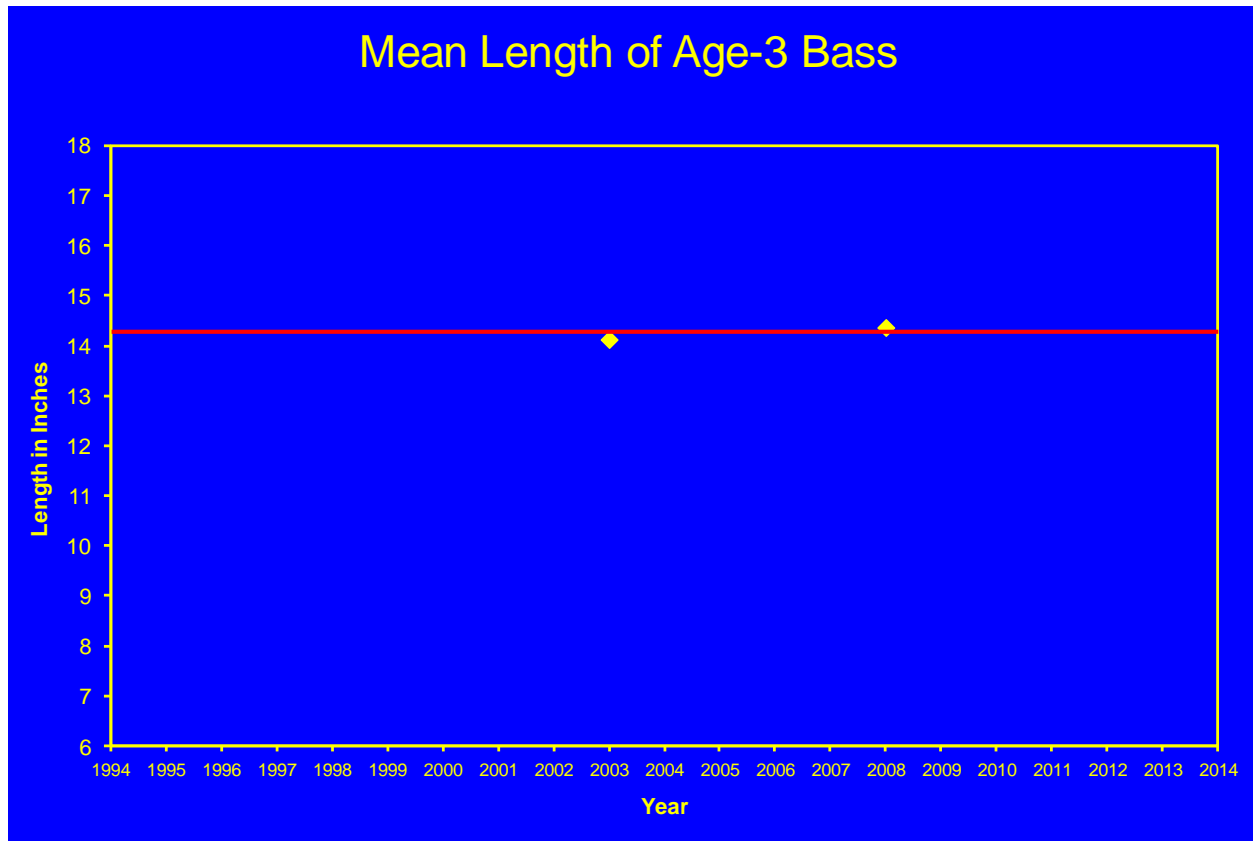
Largemouth bass represent 90% of bass angler catch and bass sampled by spring electrofishing. Spotted bass grow to good sizes in Barren River Lake (15-17 inches) but only account for 5-10% of the bass caught by anglers or electrofishing. Smallmouth similarly grow to large sizes (20-inch plus), but approximate only 1% of the bass population.

The following graphs show trends and rankings for five population parameters used in the largemouth bass assessment. Due to flooding and persistent high water levels in 2011 and 2013, we were unable to conduct adequate bass samples in those years.



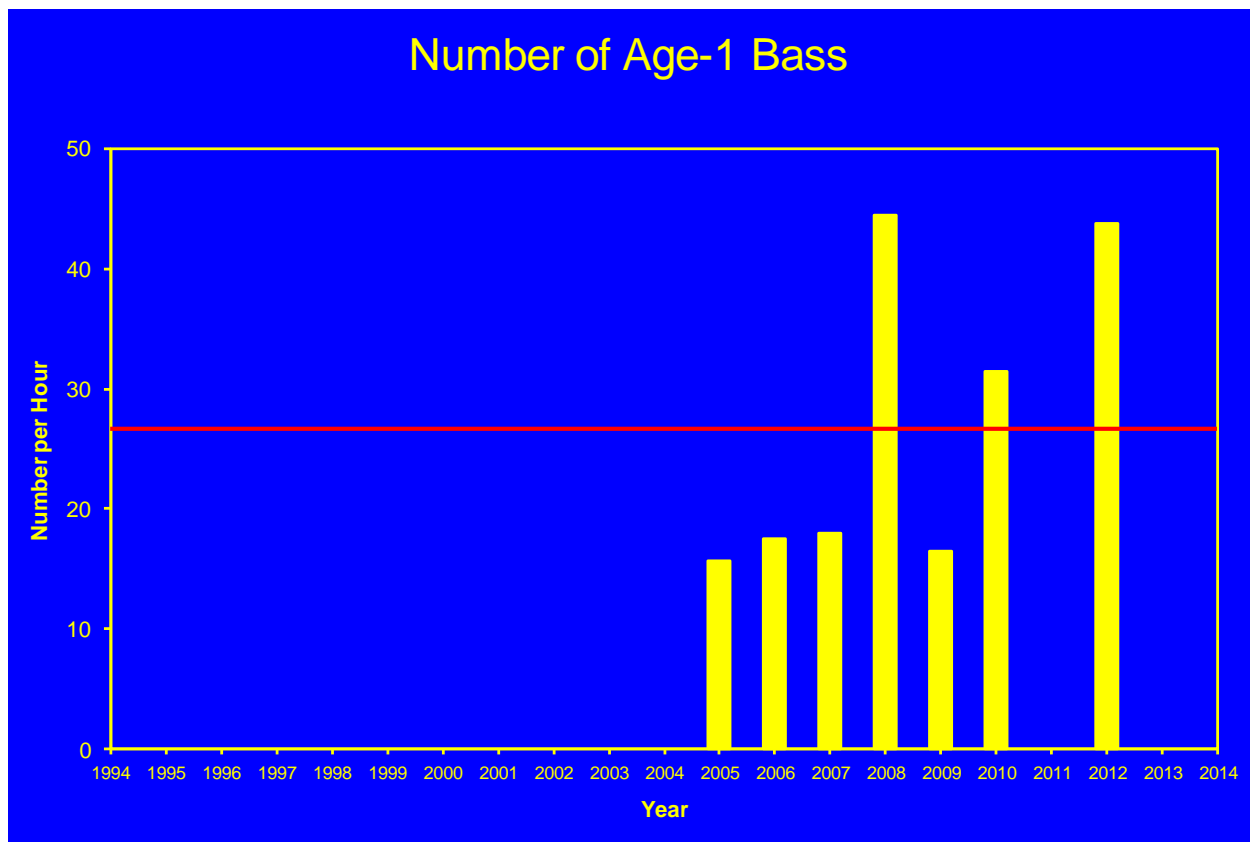
Parameter 1 – Length at age-3 (growth rate)

Mean length of age-3 largemouth bass collected at Barren River Lake (2003 and 2008) is 14.25 inches (represented by the red line). This is an exceptional growth rate for a reservoir largemouth population in Kentucky and speaks to the lake's fertility and abundant food resources.



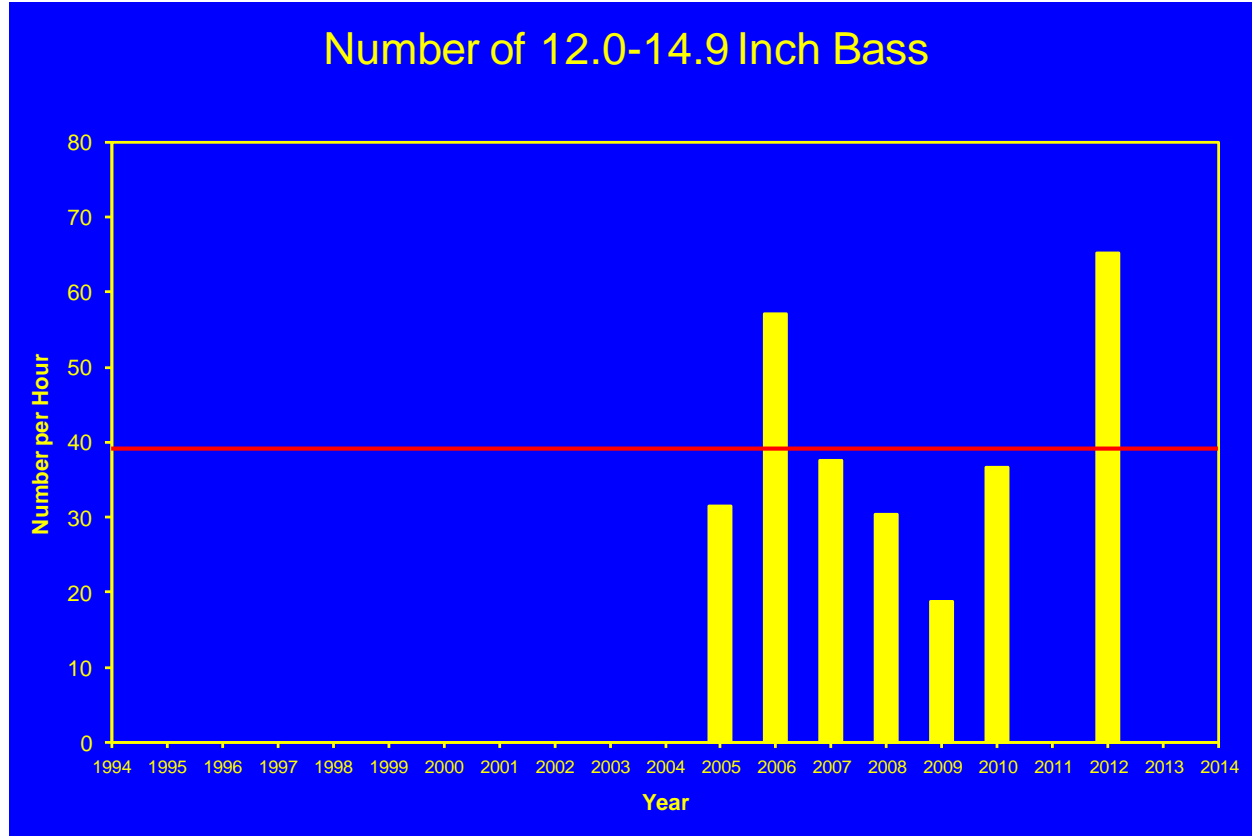
Parameter 2 – Numbers of age-1 bass (how good the spawn was)

KDFWR looks at the spring electrofishing catch rates of age-1 largemouth bass to assess the success of the spawn which occurred in the prior year. This is an important parameter because the number of bass produced represents how good the fishing will be once these fish grow large enough for anglers to catch. At Barren River Lake, age-1 largemouth bass catch rates have averaged 26.8 fish per hour of electrofishing since 2005. Exceptional spawns or year classes were produced in 2007, 2009 and 2011; however, largemouth bass spawning success in Barren River Lake does not seem to experience extreme lows noted in less productive KY reservoirs.



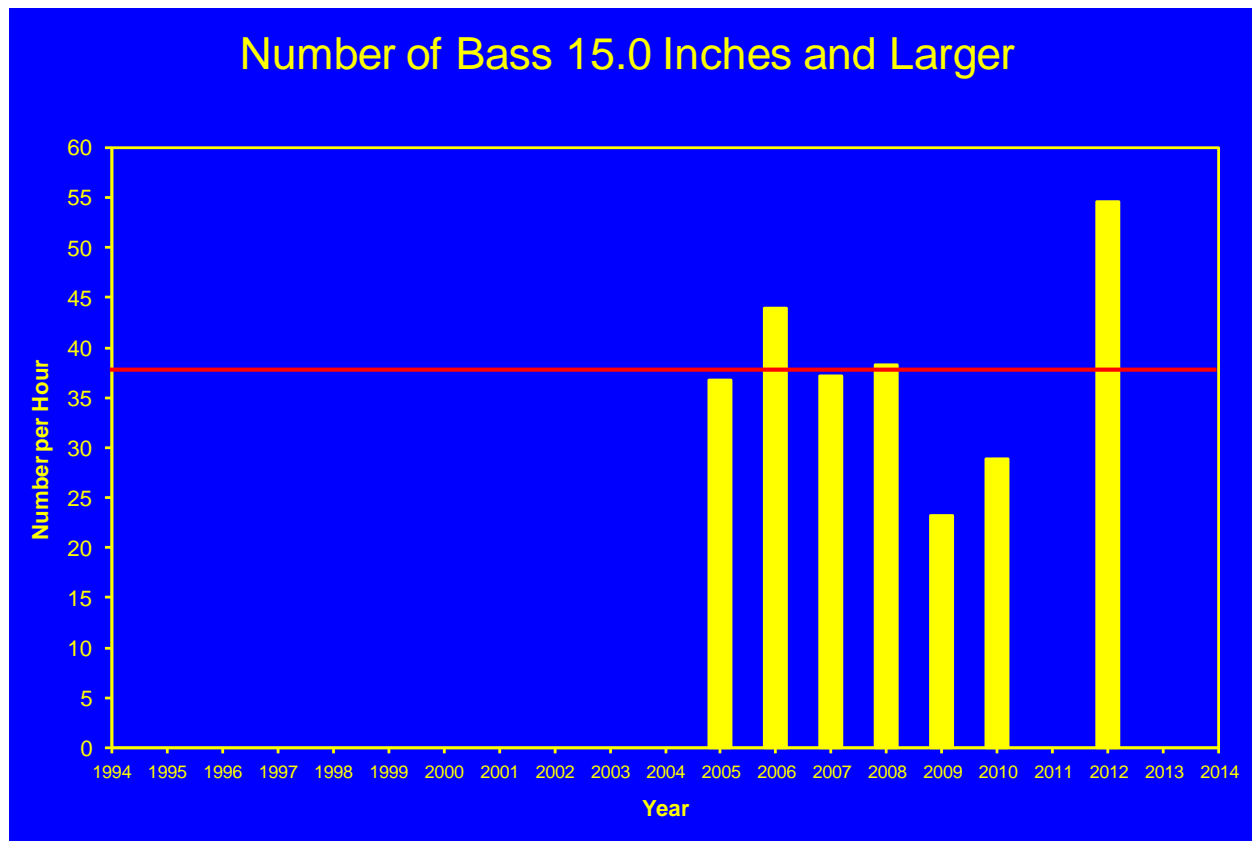
Parameter 3 – Numbers of 12.0-14.9 inch bass

Spring electrofishing catch of 12.0-14.9 inch largemouth bass has averaged just under 40 fish/hour, which is exceptional compared to other large reservoirs in KY. This parameter only dipped below a very good rating (25 fish/hour) once in the years noted below, reflecting the lake's consistency in producing a quality bass population. This parameter affords a reasonable expectation of how many largemouth will move into the 15-inch plus size range by year's end.



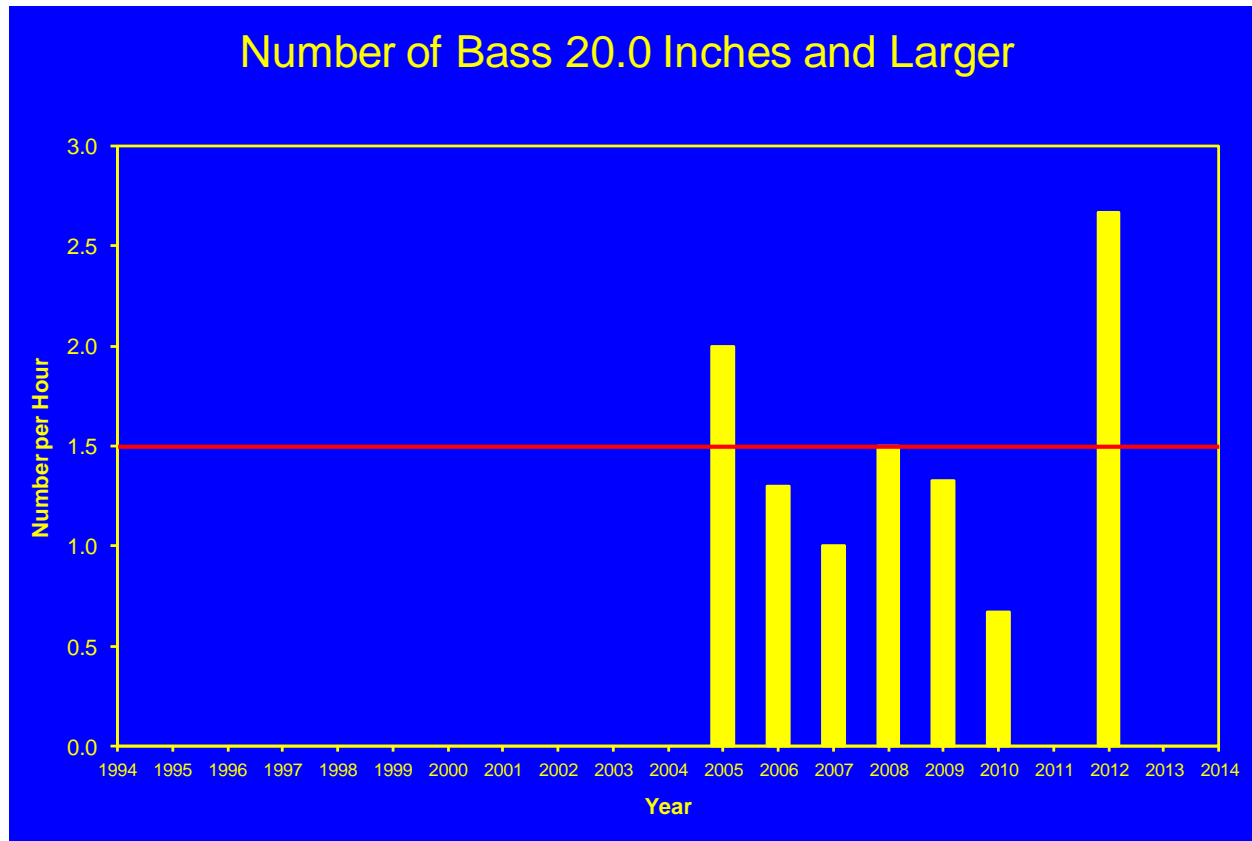
Parameter 4 – Numbers of 15 inch and larger bass

Spring electrofishing samples of 15 inch and larger largemouth bass at Barren River Lake have averaged just over 37 fish/hour. This parameter also reflects Barren River Lake as one of Kentucky's best largemouth bass lakes as it consistently produces exceptional numbers of 15-inch and larger bass. Even the leanest year for 15-inch plus largemouth at Barren River Lake still ranked in the excellent category (20 fish/hour) when compared to other large KY reservoirs. These stable yields of 15-inch plus largemouth make it one of the most consistent quality largemouth bass fisheries in the state.



Parameter 5 – Numbers of 20-inch and larger bass

Spring electrofishing catch of 20.0 inch and larger largemouth bass has averaged just under 1.5 fish/hour. Latest data from 2012 (2.67 fish/hour) was well above average, but still only gave Barren River Lake a good ranking for large KY reservoirs. Largemouth bass in Barren River Lake take at least 5-8 years to achieve 20 inches in length. The stability of quality bass production makes catching trophy largemouth in 2014 a likely occurrence.



Overall – Total Assessment Score (All five parameters added together)

Overall, the largemouth bass fishery at Barren River Lake has averaged a good rating (15.4). The largemouth bass population at Barren River Lake has historically (prior to years noted in this assessment) been consistently good and ranked as one of the top bass fisheries in the state and 2014 will be no exception.

